



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,339	05/25/2001	Kerry S. Atkinson	568	2329

7590 04/23/2004

Robert A. Bingham
DYNO NOBEL INC.
Eleventh Floor
Crossroads Tower
Salt Lake City, UT 84144

EXAMINER

MILLER, EDWARD A

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,339

Applicant(s)

ATKINSON ET AL.

Examiner

Edward A. Miller

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 11, 13-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 11, 13-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 3641

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Appellants' Brief has been noted. However, due to recent changes in Office procedure, what is notoriously well known in the art cannot be newly supported in an Examiner's Answer. Further, reliance on a reference newly cited by appellants in an Examiner's Answer is also prohibited. Therefore, the finality of the previous rejection is withdrawn, and a new final rejection is made, which supplies support for previously set forth "well known" prior art, and relies on the prior art newly cited by applicants.

3. Claims 10-11, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrence et al. in view of Engsbraten, Waldock and Patterson et al., in further view of Guralnik and Conrad '547.

Lawrence et al. teach the basic idea of varying the composition as it is being made and pumped into the bore hole, for example at col. 1, lines 45-54. Variation of the amounts and specific notoriously well known ingredients such as the amounts of water, fuel, oxidizer salts, emulsifier, and so on, is notoriously well known and would have been obvious to one of ordinary skill. Engsbraten and Waldock further teach variations of ingredients or amounts to obtain controlled strength and energy. In Engsbraten, see the Abstract and, col. 4, lines 6-10 and col. 5, lines 2-12. In Waldock, see the Abstract and col. 1, lines 39-55. Patterson et al., cited by applicants, further shows the aspect of adding a water phase separately to an already formed emulsion. Note the Abstract of Patterson et al., as well as col. 2, lines 15-18 and 31-61, col. 3, lines 45-50, col. 4, lines 50-62, and particularly col. 5, lines 48-62. It is perfectly clear that by adding a second emulsion with only water, oil and emulsifier to the first explosive w/o emulsion, that one may dilute or water down the first emulsion, and this in fact "comprises" adding water to the first emulsion. It is taught and notoriously well

Art Unit: 3641

known to vary properties, including strength, density, and many others. It is further well known to “water” or “water down” something, to subsequently dilute that something. To do so to produce the expected result of a less strong, diluted strength explosive, would have been obvious. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

In the instant arguments, including as set forth in the appellants’ Brief, appellants/applicants fail to comprehend the meaning of “water down”, as previously used to support what is notoriously well known. Thus, in the sense the examiner used the term, applicants are directed to the dictionary meaning of “watered” or “watered down”. Clearly, one common conception of such is to water down, or dilute, something that already exists. Popularly, one might refer to a restaurant or bar which increased profits by watering down alcoholic beverages in drinks served there. This might also have a motive to water the drinks of persons who had too much to drink, for their safety. The point is not the motive, the point is that one would start with the “real deal”, or branded liquor, and then add water such as might have come from melted ice, to retain the essence, but decrease the strength. As argued, the applicants’ improvement as claimed is to prepare a [rich] base emulsion, and then subsequently reduce the energy thereof by addition of more water. In other words, the applicants claimed invention is to “water the explosive down” (so to speak) so it is less energetic. As is notoriously well known, the explosive energy derives from the fuel and the oxidizer reacting very rapidly. The presence of water, as is notoriously well known, is to be an inert [it is neither a fuel nor an oxidizer], and it is also known to provide a heave effect from generating water vapor, to heave the ore that is being mined physically from its original location in the solid rock, for subsequent collection via a number of means. This heave effect comes at least partly from the vaporization of

Art Unit: 3641

the water. In so doing, the water absorbs some of the energy released by the redox system of the explosively reacting fuel/oxidizer mix. Thus, the distinction as claimed and argued is that there are two steps of adding water, the first in making the emulsion which is made rich in explosive power, and then subsequently additional water is added to water down the energy produced when a reduced strength explosive is desired. It is taught to produce an explosive of a desired strength in the references. Further, it is taught to vary the amounts and ingredients for a desired effect, as set forth above. Further, it would have been obvious to subsequently add the water, as one may later dilute a strong explosive for weakness, but one cannot readily "undiluted" an explosive because of the danger of an unintended explosion if one heats to evaporate excess water to strengthen an explosive mix or emulsion. In any event, variation of the order of adding of the water, either in a single step of original manufacture when the final desired properties are known, or in a plurality of steps, to first make a strong emulsion that may be later "watered" as desired for diluted strength, as a desired results effective variable, would have been obvious. Conrad is further cited, solely to show controlling density by subsequent addition of ingredients, as on col. 1, lines 5-10 and col. 1, line 72-col. 2, line 15 and the examples, where the product is adjusted at the end of the process to obtain the desired properties. In this sense, variation of the order of steps is obvious, assuming no unexpected result from the change in order of steps. A prima facie case having been made, the burden shifts to applicants. See also MPEP 2144.04, in pertinent part:

...C. Changes in Sequence of Adding Ingredients

Ex parte Rubin, 128 USPQ 440 (Bd. App. 1959) (Prior art reference disclosing a process of making a laminated sheet wherein a base sheet is first coated with a metallic film and thereafter impregnated with a thermosetting material was held to render prima facie obvious claims directed to a process of making a laminated sheet by reversing the order of the prior art process steps.). See also *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.).

Art Unit: 3641

4. This rejection is modified solely by the use of references to support previously relied upon "well known" prior art, since appellants now dispute and mischaracterize in their brief, that which the examiner previously urged as "well known." Also the rejection is modified to rely on applicants' newly cited reference. Where information is submitted in an information disclosure statement during the period set forth in 37 CFR 1.97(c) with a fee, the examiner may use the information submitted, e.g., a printed publication, and make the next Office action final whether or not the claims have been amended.

5. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198.

If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em
April 19, 2004



**EDWARD A. MILLER
PRIMARY EXAMINER**